REMARKS

Upon entry of this First Response, claims 1-3, 5-11, and 13-21 are pending in this application. Claims 1, 5, 8, 13, and 18 have been directly amended herein, and claims 20 and 21 are newly added. Further, claims 4 and 12 are cancelled by the amendments made herein.

It is believed that the foregoing amendments add no new matter to the present application and place the application in condition for allowance.

Response to Specification Objection

The abstract of the disclosure presently stands objected to because it contains legal phraseology "comprising," as indicated at page 2 of the outstanding Office Action. Applicants submit that the Abstract has been amended such that the phraseology "comprising" is not longer included in the Abstract in an effort to comply with requirements made in the Office Action. In view of these amendments, Applicants request that the objections to the abstract be withdrawn.

Response to §103 Rejections

In order for a claim to be properly rejected under 35 U.S.C. §103, the combined teachings of the prior art references must suggest all features of the claimed invention to one of ordinary skill in the art. See, *e.g.*, *In Re Dow Chemical*, 5 U.S.P.Q.2d 1529, 1531 (Fed. Cir. 1988), and *In re Keller*, 208 U.S.P.Q. 871, 881 (C.C.P.A. 1981). In addition, "(t)he PTO has the burden under section 103 to establish a *prima facie* case of obviousness." *In re Fine*, 837 F.2d 1071, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988) (Citations omitted).

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Claim 1

Claim 1 presently stands rejected under 35 U.S.C. § 103 as allegedly unpatentable over *Menis* in view of *Nakajima*. Claim 1 reads as follows:

> 1. A device testing system comprising;
> automated test equipment (ATE) configured to interface to a device under test (DUT); and
> logic configured to select a test set of data comprising a plurality of test pairs, the test pairs indicative of DUT parameter values, the logic further configured to select a subset of the plurality of test pairs from the test set of data and to test the DUT via the ATE with a portion of the selected subset, *the logic further configured to interpolate at least one other test result value corresponding to another test pair in the portion based upon a test result of at least one of the test pairs.* (Emphasis Added).

Applicants respectfully submit that the combination of *Menis* and *Nakajima* fails to teach or suggest at least the features of claim 1 highlighted hereinabove.

Specifically, *Nakajima* appears to teach a system wherein:

> "...if in [an] edge region there exists some edge region which has a test point at which the test result is a pass while the test result at another test point which is adjacent to this test point is a fail, picks out the block which has this edge region mutually in common therewith as another block **for which testing is to be performed** at all of the test points within it."

See *Nakajima*, paragraph 13. (Emphasis Added).

However, *Nakajima* does not appear to teach or suggest "logic further configured to interpolate at least one other test result value corresponding to another test pair in the portion based upon a test result of at least one of the test pairs." In addition, such features do not appear to be suggested by *Menis*.

Accordingly, for at least the reasons set forth above, Applicants assert that the cited art fails to suggest at least the features of amended claim 1 highlighted above. Thus, the 35 U.S.C. § 103 rejection of claim 1 should be withdrawn.

Claims 2 and 3

Applicants submit that the pending dependent claims 2 and 3 contain all features of their respective independent claim 1. Since claim 1 should be allowed as argued hereinabove, pending dependent claims 2 and 3 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988). Furthermore, these dependent claims recite patentably distinct features and/or combinations of features that make them allowable, notwithstanding the allowability of their base claim 1.

Claim 8

Claim 8 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *Menis* in view of *Nakajima*. Claim 8 reads as follows:

> 8.   A device testing method, comprising the steps of:
> selecting a test set of data comprising a plurality of test pairs, the test pairs indicative of device-under-test parameter values;
> selecting a subset of test pairs from the plurality of test pairs;
> testing the device-under-test via automated test equipment with a portion of the selected subset; and
> ***interpolating at least one other test result value corresponding to another test pair in the portion based upon a test result of at least one of the test pairs.*** (Emphasis Added).

Applicants assert that the combination of *Menis* and *Nakajima* fails to teach or suggest at least the features of claim 8 highlighted above for at least reasons similar to those argued with respect to claim 1. Accordingly, Applicants respectfully request that the §103 rejection of amended claim 8 be withdrawn.

Claims 9-11

Applicants submit that the pending dependent claims 9 and 11-16 contain all features of their respective independent claim 8. Since claim 8 should be allowed as argued hereinabove, pending dependent claims 9 and 11-16 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 17

Claim 17 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *Menis* in view of *Nakajima*. Claim 17 reads as follows:

> 17.   A device testing system, comprising:
> automated testing equipment (ATE) interfaced to a device-under-test (DUT);
> means for selecting a subset of a test set of test pairs for transmitting to the ATE for testing of the DUT;
> means for testing the DUT with a portion of the subset of test pairs; and
> ***means for predicting the test results for the test set of test pairs based upon a subset of test results obtained from testing a portion of the subset.*** (Emphasis Added).

Applicants assert that the combination of *Menis* and *Nakajima* fails to teach or suggest at least the features of claim 17 highlighted above.

Specifically, *Nakajima* appears to teach a system wherein:

> "...if in [an] edge region there exists some edge region which has a test point at which the test result is a pass while the test result at another test point which is adjacent to this test point is a fail, picks out the block which has this edge region mutually in common therewith as another block **for which testing is to be performed** at all of the test points within it."

See *Nakajima*, paragraph 13. (Emphasis Added).

However, *Nakajima* does not appear to teach or suggest "means for predicting the test results for the test set of test pairs based upon a subset of test results obtained from testing a portion of the subset." In addition, such features do not appear to be suggested by *Menis*.

Accordingly, for at least the reasons set forth above, Applicants assert that the cited art fails to suggest at least the features of claim 17 highlighted above. Thus, the 35 U.S.C. §103 rejection of claim 17 should be withdrawn.

Claim 18

Claim 18 presently stands rejected under 35 U.S.C. §103 as allegedly unpatentable over *Menis* in view of *Nakajima*. Claim 18 reads as follows:

> 18. A computer program for testing a device, the computer program being embodied on a computer-readable medium, the program comprising:
> logic configured to select a test set of data comprising a plurality of test pairs, the test pairs indicative of device-under-test parameter values;
> logic configured to select a subset of test pairs from the plurality of test pairs; and
> logic configured to test the device-under-test via the automated testing equipment with a portion of the selected subset; and
> ***logic configured to interpolate at least one test result value of one other test pair in the portion based upon the test results of at least one of the test pairs.*** (Emphasis Added).

Applicants assert that the combination of *Menis* and *Nakajima* fails to teach or suggest at least the features of claim 18 highlighted above for at least reasons similar to those argued hereinabove with respect to claim 1. Accordingly, Applicants respectfully request that the §103 rejection of amended claim 18 be withdrawn.

Claim 19

Applicants submit that the pending dependent claim 19 contains all features of its respective independent claim 18. Since claim 18 should be allowed as argued hereinabove, pending dependent claim 19 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 20

Claim 20 is newly added as reads as follows:

> 20.   A device testing system comprising;
> automated test equipment (ATE) configured to interface to a device under test (DUT); and
> logic configured to select a test set of data comprising a plurality of test pairs, the test pairs indicative of operational parameters corresponding to the DUT, the logic further configured to select a subset in the shape of a cross shmoo of the plurality of test pairs from the test set of data and to test the DUT via the ATE with a portion of the selected subset based upon a test result of at least one of the test pairs,
> wherein the cross shmoo comprises a first leg, a second leg, a third leg, and a fourth leg, and wherein the logic is further configured to determine a first test result indicative of a first endpoint of the first leg and a second test result indicative of a second endpoint opposite the first endpoint, the logic further configured to calculate a transition point between the first endpoint and the second endpoint if the first test result and the second test result exhibit different values.

Applicants respectfully submit that claim 20 encompasses each limitation in previous claim 4, which was indicated as allowable by the Examiner during a telephone conference with Applicants' Agent and Attorney on November 16, 2004. Thus, Applicants request that claim 20 be allowed in its current form.

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Claims 5-7

Applicants submit that the pending dependent claims 5-7 contain all features of their respective independent claim 20. Since claim 20 should be allowed as argued hereinabove, pending dependent claims 5-7 should be allowed as a matter of law for at least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

Claim 21

Claim 21 is newly added as reads as follows:

> 21. A device testing method, comprising the steps of:
> selecting a test set of data comprising a plurality of test pairs, the test pairs indicative of operational parameters corresponding to the device-under-test;
> selecting a subset of test pairs from the plurality of test pairs, the subset of test pairs forming a cross shmoo and comprising a first leg, a second leg, a third leg, and a fourth leg;
> testing the device-under-test via automated test equipment with a portion of the selected subset based upon a test result of at least one of the test pair;
> determining a first test result indicative of a first endpoint of the first leg and a second test result indicative of a second endpoint opposite the first endpoint; and
> calculating a first transition point between the first endpoint and the second endpoint if the first test result and the second test result exhibit different values.

Applicants respectfully submit that claim 21 encompasses each limitation in previous claim 12, which was indicated as allowable by the Examiner during a telephone conference with Applicants' Agent and Attorney on November 16, 2004. Thus, Applicants request that claim 21 be allowed in its current form.

Claims 13-16

Applicants submit that the pending dependent claims 13-16 contain all features of their respective independent claim 21. Since claim 21 should be allowed as argued

hereinabove, pending dependent claims 13-16 should be allowed as a matter of law for at

least this reason. *In re Fine*, 5 U.S.P.Q.2d 1596, 1600 (Fed. Cir. 1988).

CONCLUSION

Applicants respectfully request that all outstanding objections and rejections be

withdrawn and that this application and all presently pending claims be allowed to issue. If

the Examiner has any questions or comments regarding Applicant's response, the Examiner

is encouraged to telephone Applicant's undersigned counsel.

Respectfully submitted,

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